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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/035,091	12/21/2001	Holly Hogrefe	100705-42-01	1719
27495 7590 10/29/2010 AGILENT TECHNOLOGIES INC, in care of: CPA Global P. O. Box 52050 Minneapolis, MN 55402			EXAMINER HUTSON, RICHARD G	
			ART UNIT 1652	PAPER NUMBER
			NOTIFICATION DATE 10/29/2010	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

IPOPS.LEGAL@agilent.com
Agilentdocketing@cpaglobal.com

Office Action Summary

Application No.

10/035,091

Applicant(s)

HOGREFE ET AL.

Examiner

Richard G. Hutson

Art Unit

1652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 August 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3, 10-12, 14, 20, 22-24, 26, 30, 31 and 33-51 is/are pending in the application.
- 4a) Of the above claim(s) 23, 24, 26, 30, 31 and 33-35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 10-12, 14, 20, 22 and 36-51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-940)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/23/2010 has been entered.

Applicant's amendment of claims 1, 12, 36, 40, 44, 48, 49 and 50, in the paper of 8/23/2010 (7/23/2010), is acknowledged. Claims 1, 3, 10-12, 14, 20, 22 23, 24, 26, 30, 31, 33-51 are pending and at issue. Applicants arguments presented in the paper of 7/23/2010 and 8/23/2010, are acknowledged and have been considered herein.

Claims 23, 24, 26, 30, 31 and 33-35 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 3, 10-12, 14, 20, 22, 36-51 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to

reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Newly amended claims 1, 3, 10-12, 14, 20, 22, 36-51 are rejected under this statute, on the basis that newly amended claim 1 (claims 3, 10-12, 14, 20, 22, 36-51 dependent from) in which applicants amended the claims to recite "said second enzyme possesses reduced 3'-5' exonuclease activity and reduced 5'-3' DNA polymerization activity as compared to the wild type Pfu DNA polymerase" is not supported by applicants specification at the time of filing and is thus considered new matter.

Applicant's comments regarding support for this amendment are acknowledged, however, not found persuasive, as applicant's specification clearly does not support that applicants had possession of the newly claimed invention at the time of filing. For example, applicants point to specification at page 20, lines 17-19 which states:

Preferably, the genetic modification for preparing exo^+ DNA polymerase with reduced polymerization activity does not significantly reduces its 3'-5' exonuclease activity (i.e., the proofreading activity).

While those polymerases with "reduced" 3'-5' exonuclease activity" may be encompassed by the above, clearly applicants invention at the time of invention was not specifically directed to those which had reduced 3'-5' exonuclease activity". Similarly applicant's specification at page 49-50 does not remedy support for such. Thus applicant's newly amended claims are drawn to new matter that was not supported by applicant's specification at the time of filing.

Claim Rejections - 35 USC § 103

The rejection of claims 1, 3, 10-12, 14, 20, 22, 36, 37, 40, 41, 44, 45, 48-51, under 35 U.S.C. 103(a) as being unpatentable over Barnes et al. (U.S. Patent No. 5,436,149), Hogreff (U.S. Patent No. 6,183,997) and Sobek et al. (U.S. Patent No. 6,881,559) is hereby with drawn based upon applicants amendment of the claims to require that the second enzyme possesses "reduced" 3'-5' exonuclease activity and the fact that the Sobek et al. does not teach the effect on 3'-5' exonuclease activity in their taught mutant DNA polymerase.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 3, 10-12, 14, 20, 22 and 36-51 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable

over claim 82-92, 96, 98-102, 116-119, 121, 123-138, 155-158, 163-170, of copending Application No. 10/227,110. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed enzyme mixtures of the instant application, comprising a first enzyme and a second enzyme wherein said first enzyme comprises a DNA polymerization activity and said second enzyme is a mutant Pfu DNA polymerase having a mutation at an amino acid position selected from the group consisting of D405, Y410, T542, K593, Y595, Y385, Y387, and G388 and those further limited claims dependent thereon are obvious over the corresponding claims of copending Application No. 10/227,110, drawn to a enzyme mixture comprising a first enzyme and a second enzyme, wherein said first enzyme comprises 5'-3' polymerization activity of a DNA polymerase or reverse transcriptase, and said second enzyme is a mutant of a wild type DNA polymerase, said wild type DNA polymerase comprising the partitioning domain sequence YXGG (SEQ ID NO:6), the polymerase domain sequence DXXSLYP (SEQ ID NO: 1) or DFRALYP (SEQ ID NO: 13), the polymerase domain sequence YXDTDS (SEQ ID NO:4), YIDTDG (SEQ ID NO:15), YADTDG (SEQ ID NO:16), or YSDTDG (SEQ ID NO: 17), and the polymerase domain sequence KXY, and wherein said second enzyme comprises an amino acid substitution at an amino acid position corresponding to G387 of SEQ ID NO: 19, and wherein said second enzyme comprises 3'-5' exonuclease activity and reduced 5'-3' DNA polymerization activity as compared to the wild type DNA polymerase. Application 10/227,110 further teaches the above enzyme mixtures wherein said mutant

polymerase additionally comprises a mutation selected from Y410, T542, K593, Y595, Y385, Y387, and G388, thus making the instant claims obvious.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Applicants request to keep this rejection in abeyance until the time of identification of otherwise allowable subject matter is acknowledged.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard G. Hutson whose telephone number is 571-272-0930. The examiner can normally be reached on M-F, 7:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mondesi Robert can be reached on 571-272-0956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

rg
10/25/2010

/Richard G Hutson/
Primary Examiner, Art Unit 1652